GLOSSARY

Section I

Abbreviations

2,4-DNT 2,4-Dinitrotoluene
2,6-DNT 2,6-Dinitrotoluene
2-Am-DNT.....2-Amino-4,6-Dinitrotoluene
4-Am-DNT.....4-Amino-2,6-Dinitrotoluene
2-NT 2-Nitrotoluene
3-NT 3-Nitrotoluene
4-NT 4-Nitrotoluene
AAPP .....Abbreviated Accident Prevention Plan
ABP.....Agent Breakdown Product
ADR .....Automated Date Review
AEC.....Army Environmental Center
AES .....Atomic Emission Spectrometry
AM .....Approval Memorandum
AM/FM .....Automated Mapping/Facilities Management
AOC .....Area of Concern
AOI .....Area of Interest
AOPC .....Area of Potential Concern
AP .....Ammonium Picrate
APP .....Accident Prevention Plan
AR .....Army Regulation
ARAR .....Applicable or Relevant and Appropriate Requirement
ARB .....Anomaly Review Board
ASAP .....Army Sampling and Analysis Plan
ASCII .....American Standard Code for Information Interchange
ASR.....Archives Search Report
ASSHP .....Abbreviated Site Safety and Health Plan
BMP .....Bit Map
BRAC.....Base Realignment and Closure
CADD .....Computer-aided Design and Drafting
CAR .....Corrective Action Request
CAS.....Chemical Abstracts Service
CD .....Compact Disk
CDC .....Contained Detonation Chamber
CDQM.....Chemical Date Quality Management
CERCLA.....Comprehensive Environmental Response, Compensation and Liability Act

CFR.....Code of Federal Regulations
CLP.....Contract Laboratory Program
CO.....Contracting Officer
COE.....Corp Of Engineers
COR.....Contracting Officer's Representative
CRREL.....Cold Regions Research Engineering Laboratory
CSM.....Conceptual Site Model
CSS.....Chemical Safety Submission
CVAA.....Cold Vapor Atomic Absorption
CWA.....Chemical Warfare Agent
CWM.....Chemical Warfare Materiel
CX.....Center of Expertise
DA.....Department of the Army
DA Pam.....Department of the Army Pamphlet
DC.....Design Center
DD.....Decision Document
DDESB.....Department of Defense Explosives Safety Board
DEM.....Digital Elevation Model
DERP.....Defense Environmental Restoration Program
DGM.....Digital Geophysical Mapping
DGPS.....Differential GPS
DID.....Data Item Description
DNX.....Hexahydro-1.3-dinitroso-5-nitro-1,3,5-triazine
DOD.....Department of Defense
DOP.....Dilution of Precision
DOQQ.....Digital Orthophoto Quarter-Quads
DOT.....Department of Transportation
DQO.....Data Quality Objective
DRU.....Direct Reporting Unit
DSSS.....Direct Sequence Spread Spectrum
DXF.....Drawing Interchange File
EC.....Engineer Circular
ECBC.....Edgewood Chemical Biological Center
EDD.....Electronic Data Deliverable
EDMS.....Environmental Data Management System
EDQW.....Environmental Data Quality Workgroup
EE/CA.....Engineering Evaluation/Cost Analysis
EM.....Engineer Manual
EOD.....Explosive Ordnance Disposal
EP.....Engineer Pamphlet
EPA.....U.S. Environmental Protection Agency

EPP.....Environmental Protection Plan
ER .....Engineer Regulation
ERDC.....Engineering Research and Development Center
ESP.....Existing Siting Plans
ESQD .....Explosives Safety Quantity Distance
ESS.....Explosives Safety Submission
EZ.....Exclusion Zone
FAR.....Federal Acquisition Regulation
FATE.....Field Analytic Technologies Encyclopedia
FDEM .....Frequency Domain Electromagnetics
FFP.....Firm Fixed Price
FoT.....Field of Testing
FPD .....Flame Photometric Detection
Frag .....UXO metallic fragments
FS .....Feasibility Study
FSP.....Field Sampling Plan
FUDS .....Formerly Used Defense Site
GC .....Gas Chromatography
GDGDS.....Geospatial Data & Geospatial Data System
GDS.....Geospatial Data System
GFAA.....Graphic Furnace Atomic Adsorption
GFE .....Government-Furnished Equipment
GFI .....Government-Furnished Information
GIP .....Geophysical Investigation Planning
GIS .....Geographic Information System
GPO.....Geophysical Prove-out
GPS .....Global Positioning System
HAZWOPER .....Hazardous Waste Operations and Emergency Response
HDOP.....Horizontal DOP
HE .....High Explosive
HFD.....Hazardous Fragmentation Distance
HMX Octahydro-1,3,5,7-tetrazocine
HPLC .....High Performance Liquid Chromatography
HQUSACE.....Headquarters, U.S. Army Corps of Engineers
HTRW.....Hazardous, Toxic, and Radioactive Waste
IAW.....In Accordance With
ICP .....Inductively Coupled Plasma
IDW.....Investigation Derived Waste
IHF .....Interim Holding Facility
INPR .....Inventory Project Report
INS .....Inertial Navigation Systems

IRP .....Installation Restoration Program
ISE.....Ion Selective Electrode
ITRC .....Interstate Technology Regulatory Council
JPEG .....Joint Photographic Experts Group
JPG.....Jefferson Proving Ground
LC/MS.....Liquid Chromatography/Mass Spectromedtry
LCPM.....Live-Cycle Project Manager
LIDAR .....Light Detection and Ranging
LIS.....Land Information Systems
LTM .....Long-Term Management
LUCs .....Land Use Controls
MACOM .....Major Army Command
MC .....Munitions Constituents
MCE .....Maximum Credible Event
MDL.....Method Detection Limit
MEC .....Munitions and Explosives of Concern
MFR .....Memorandum for Record
MGE.....Modular GIS Environment
MGFD .....Munition with the Greatest Fragmentation Distance
MM .....Military Munitions
MM CX .....Military Munitions Center of Expertise
MM DC .....Military Munitions Design Center
MMRP.....Military Munitions Response Program
MNX Hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
MPPEH .....Material Potentially Presenting an Explosive Hazard
MQO .....Measurement Quality Objectives
MRA .....Munitions Response Area
MRS .....Munitions Response Site
MS.....Mass Spectrometry
MSD .....Minimum Separation Distance
N/A.....not applicable
NAD83 .....North American Datum of 1983
NAVD88 .....North American Vertical Datum of 1988
NC .....Nitrocellulose
NCP.....National Oil and Hazardous Substances Pollution Contingency Plan
NDGPS .....Nationwide Differential GPS
NELAP.....National Environmental Laboratory Accreditation Program
NEW .....Net Explosive Weight
NFPA .....National Fire Protection Association
NG.....Nitroglycerine
NPD.....Nitrogen Phosphorous Detector

NPL .....National Priorities List
NQ.....Nitroquanidine
OB .....Open Burn
OD.....Open Detonation
OE .....Ordnance and Explosives
OESS.....OE Safety Specialist
PA .....Preliminary Assessment
PAH.....Polynuclear Aromatic Hydrocarbon
PAR.....Performance Assessment Record
Pd .....Probability of Detection
PDF .....Portable Document Format
PDOP .....Position DOP
PDT .....Project Delivery Team
PES.....Potential Exposure Site
PETN.....Pentaerylthritol tetranitrate
PLS.....Professional Land Surveyor
PM.....Project Manager
PMBP.....Project Management Business Process
PMP.....Project Management Plan
PP .....Post Processing
PPE.....Personal Protective Equipment
PPI.....Past Performance Information
PPIMS.....Past Performance Information Management System
PQL.....Practical Quantitation Limit
PRP .....Potentially Responsible Party
PWS .....Performance Work Statement
QA.....Quality Assurance
QAPP .....Quality Assurance Project Plan
QAR .....Quality Assurance Report
QASP .....Quality Assurance Surveillance Plan
QC.....Quality Control
QCP.....Quality Control Plan
Q-D .....Quantity-Distance
QMP.....Quality Management Plan
QSM.....Quality Systems Manual
R&D.....Research and Development
RAB .....Restoration Advisory Board
RACER .....Remedial Action Cost Engineering and Requirements System
RA-O.....Remedial Action Operation
RC .....Response Complete
RCRA.....Resource Conservation and Recovery Act

RCWM.....Recovered Chemical Warfare Materiel
RD.....Remedial Design
RDX.....Hexahydro-1,3,5-trinitro-1,3,5-triazine
REST.....Range Evaluation Software Tool
RI/FS.....Remedial Investigation/Feasibility Study
RF.....Radio Frequency
RI.....Remedial Investigation
RIP.....Remedy-In-Place
RLS.....Registered Land Surveyor
RMS.....Root Mean Square
ROD.....Record of Decision
RTK.....Real-Time Kinematic
RTS.....Robotic Total Station
SAP.....Sampling and Analysis Plan
SDSFIE.....Spatial Data Standards for Facilities, Infrastructure, and the Environment
SDTS.....Spatial Data Transfer Standard
SEDD.....Staged Electronic Data Deliverable
SI.....Site Inspection
SMAP.....State Management Action Plan
SNR.....Signal to Noise Ratio
SOP.....Standard Operating Procedure
SOW.....Statement of Work
SPE.....Solid-Phase Extraction
SPME.....Solid-Phase Micro-Extraction
SR.....Special Report
SR.....Stationary Receivers
SSHO.....Site Safety and Health Officer
SSHP.....Site Safety and Health Plan
STD.....standard
TAL.....Total Analyte List
TBC.....To Be Considered
TCLP.....Toxicity Characteristic Leaching Procedures
TCRA.....Time Critical Removal Action
TDEM.....Time Domain Electromagnetics
TDOP.....Time DOP
TIFF.....Tagged Image File Format
TM.....Technical Manual
TNT.....Trinitrotoluene
TNX.....Hexahydro-1,3,5-trinitroso-1,3,5-triazine
TO.....Task Order
TP.....Technical Paper

TPP.....Technical Project Planning
TR .....Technical Report
TRW.....Technical Review Workgroup
TSD.....Team Separation Distance
URL.....Universal Resource Locator
USACE .....U.S. Army Corps of Engineers
USAESCH .....U.S. Army Engineering and Support Center, Huntsville
USATCES.....U.S. Army Technical Center for Explosives Safety
USGS .....U.S. Geophysical Survey
USRADS.....Ultrasonic Ranging and Data System
UTM.....Universal Transverse Mercator
UXO.....Unexploded Ordnance
UXOQCS .....UXO Quality Control Specialist
UXOSO.....UXO Safety Officer
VDOP.....Vertical DOP
WAAS.....Wide Area Augmentation System
WGS84.....World Geodetic System of 1984
WP.....White Phosphorous

Section II
Terms

Action Memorandum
Approves time-critical removal action and concludes the engineering evaluation/cost analysis. Provides a concise, written record of the decision to select an appropriate removal action. As the primary decision document, it substantiates the need for a removal action, identifies the proposed action, and explains the rationale for the removal action selected.

Active Installations
Installations under the custody and control of DOD. Includes operating installations, installations in a standby or layaway status, and installations awaiting closure under the Base Realignment and Closure (BRAC) legislation.

Active Range
A military range that is currently in service and is being regularly used for range activities (40 CFR 266.201).

Administrative Record
The body of documents that "forms the basis" for the selection of a particular response at a site. Documents that are included are relevant documents that were relied upon in selecting the response action as well as relevant documents that were considered but were ultimately rejected. Until the Administrative Record is certified, it shall be referred to as the "Administrative Record file."

Anomaly
Any item that is seen as a subsurface irregularity after geophysical investigation. This irregularity will deviate from the expected subsurface ferrous and non-ferrous material at a site (i.e., pipes, power lines, etc.).

Anomaly Avoidance
Techniques employed by EOD or UXO personnel at sites with known or suspected MEC to avoid any potential surface MEC and any subsurface anomalies. This usually occurs at mixed hazard sites when HTRW investigations will occur prior to execution of a munitions response. Intrusive anomaly investigation is not authorized during ordnance avoidance operations.

Anomaly Review Board (ARB)
The ARB is a technical group established to review decisions and recommendations made by the Project Delivery Team on the detection and evaluation of subsurface anomalies. ARBs will be used only in exceptional circumstances, such as at CWM sites.

Applicable or Relevant and Appropriate Requirements (ARARs)
Applicable requirements are cleanup standards, standards of control, and other substantive environmental protection requirements promulgated under Federal or state environmental law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstance found at a CERCLA site. Relevant and appropriate requirements are cleanup standards that, while not "applicable", address situations sufficiently similar to those encountered at a CERCLA site that their use is well suited to the particular site.

Approval Memorandum
Documents the decision to perform a removal action based on an evaluation of the NCP factors contained in 40 CFR 300.415(b). Secures management approval and funding to conduct the engineering evaluation/cost analysis.

Archives Search Report (ASR)
A detailed investigation to report on past MEC activities conducted on an installation. The principal purpose of the Archives Search is to assemble historical records and available field data, assess potential ordnance presence, and recommend follow-up actions at a DERP-FUDS. There are four general steps in an Archives Search: records search phase, site safety and health plan, site survey, archives search report including risk assessment.

Base Realignment and Closure (BRAC)
Program governing the scheduled closing of Department of Defense sites. (Base Closure and Realignment Act of 1988, Public Law 100-526, 102 Stat. 2623, and the Defense Base Closure and Realignment Act of 1990, Public Law 101-510, 104 Stat. 1808)

Biological Warfare Material (BWM)
BWM is any item configured as a munition containing an etiologic agent that is intended to kill, seriously injure, or incapacitate a person through physiological effects; includes biological agent identification sets. BWM can also include etiological agents that are designed to damage or destroy crops that are intended for human consumption. (CESO Memorandum, 13 April 1998, Subject: Applicability of Biological Warfare Material and Non-Stockpile Chemical Warfare Response Activity Interim Guidance)

Center of Expertise (CX)
A CX is a USACE organization that has been approved by HQUSACE as having a unique or exceptional technical capability in a specialized subject area that is critical to other USACE commands. These services may be reimbursable or centrally funded.

Chemical Warfare Materiel (CWM)
An item configured as a munition containing a chemical substance that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. Also includes V- and G- series nerve agent, H- series blister agent, and lewisite in other-than-munition

configurations. Due to their hazards, prevalence, and military-unique application, chemical agent identification sets (CAIS) are also considered CWM. CWM does not include: riot control agents, chemical herbicides; smoke and flame producing items; or soil, water, debris, or other media contaminated with chemical agent.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)
Congress enacted CERCLA, commonly known as Superfund, on 11 December 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment.

Conceptual Site Model (CSM)
A description of a FUDS and its environment that is based on existing knowledge. It describes sources of military munitions or HTRW at a property; actual, potentially complete, or incomplete exposure pathways; current or reasonably anticipated future land use; and potential receptors.

Construction Support
Support provided by qualified UXO personnel during construction activities at potential Munitions Response Areas to ensure the safety of construction personnel from the harmful effects of MEC. When a determination is made that the probability of encountering MEC is low (e.g., current or previous land use leads to an initial determination that MEC may be present), a minimum of a two person munitions response team will stand by in case the construction contractor encounters suspected MEC. When a determination is made that the probability of encountering MEC is moderate to high (current or previous land use leads to a determination that MEC was employed or disposed of in the parcel of concern, e.g., open burn and open detonation areas, maneuver areas, etc.), munitions response teams are required to conduct subsurface munitions response for the known construction footprint either in conjunction with the construction contractor or prior to construction intrusive activities. The level of effort will be determined on a case-by-case basis in coordination with the MM CX .

Control Markers
Project control markers may consist of markers and/or benchmarks established by any federal, state, local, or private agency with positional data within the minimum acceptable accuracy standards prescribed by the project team.

Conventional Munitions and Explosives of Concern
The term “conventional MEC” refers to munitions and explosives of concern (see definition) other than CWM, biological warfare material warfare material and nuclear ordnance.

Corrective Action
The action taken to eliminate the causes of an existing nonconformity, defect, or other undesirable situation in order to prevent recurrence. (ER 5-1-11) Note: Following through with a corrective action is critical. In performing a corrective action, the PDT should be careful not to simply correct the resultant symptoms of a systematic problem, but should seek to rectify the real cause behind the problem, as well as investigate if there are other aspects of the project that may have been affected by the systemic problem.

Corrective Action Request
The Corrective Action Request is a report documenting action to correct conditions adverse to quality.

Customer
The customer is a party, organization, or sponsor that depends upon the professional services, expertise, and advice of a project manager and technical personnel. Typically, the customer is the decision maker who is funding the project and responsible for the project property, such as the DOD agencies, and sometimes the U.S. Environmental Protection Agency. The customer is a key member of the PDT and should be encouraged to participate through the Technical Project Planning process.

Data Quality Objective (DQO)
A DQO is a qualitative and quantitative statement developed to clarify study objectives, define the type of data needed, and specify the tolerable levels of potential decision errors. A DQO is used as the basis for establishing the type, quality and quantity of data needed to support the decisions that will be made.

Decision Document
The Department of Defense has adopted the term Decision Document for the documentation of remedial action (RA) decisions at non-National Priorities List (NPL) FUDS Properties. The decision document shall address the following: Purpose, Site Risk, Remedial Alternatives, Public/Community Involvement, Declaration, and Approval and Signature. A Decision Document for sites not covered by an interagency agreement or Federal facility agreement is still required to follow a CERCLA response. All Decision Documents will be maintained in the FUDS Property/Project Administrative Record file. An Action Memorandum is the decision document for a removal response action.

Defense Environmental Restoration Program (DERP)
Congressionally authorized in 1986, DERP promotes and coordinates efforts for the evaluation and cleanup of contamination at Department of Defense installations and Formerly Used Defense Sites. (10 USC 2701 et. seq.)

Design Center (DC)
A specified USACE field office assigned a singular technical mission that is permanent and USACE-wide in scope. The designated office is to be considered the "lead activity" in a specialized area where capability needs to be concentrated for maximum effectiveness, economy, and efficiency. The MM DC (in coordination with the District PM) will execute all phases of the MMRP response project after the approval of the INPR unless the removal action is transferred to an approved District. (ER 1110-1-8153)

Discarded Military Munitions (DMM)
Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of consistent with applicable environmental laws and regulations. (10 U.S.C. 2710(e)(2))

Engineering Evaluation/Cost Analysis (EE/CA)
An EE/CA is prepared for all non-time-critical removal actions as required by Section 300.415(b)(4)(i) of the NCP. The goals of the EE/CA are to identify the extent of a hazard, to identify the objectives of the removal action, and to analyze the various alternatives that may be used to satisfy these objectives for cost, effectiveness, and implementability. (EP 75-1-3)

Explosive Ordnance Disposal (EOD)
The detection, identification, field evaluation, rendering safe, recovery, and final disposal of unexploded ordnance or munitions.

Explosives Safety Submission (ESS)
The document which serves as the specifications for conducting work activities at the project. The ESS details the scope of the project, the planned work activities, and potential hazards (including the maximum credible event) and the methods for their control.

Explosive Soil
Explosive soil refers to mixtures of explosives in soil, sand, clay, or other solid media at concentrations such that the mixture itself is explosive.

(a) The concentration of a particular explosive in soil necessary to present an explosion hazard depends on whether the particular explosive is classified as "primary" or "secondary." Guidance on whether an explosive is classified as "primary" or "secondary" can be obtained from the MM CX.

(b) Primary explosives are those extremely sensitive explosives (or mixtures thereof) that are used in primers, detonators, and blasting caps. They are easily detonated by heat,

sparks, impact, or friction. Examples of primary explosives include Lead Azide, Lead Styphnate, and Mercury Fulminate.

(c) Secondary explosives are bursting and boostering explosives (i.e., they are used as the main bursting charge or as the booster that sets off the main bursting charge). Secondary explosives are much less sensitive than primary explosives. They are less likely to detonate if struck or when exposed to friction or to electrical sparks. Examples of secondary explosives include Trinitrotoluene (TNT), Composition B, and Ammonium Picrate (Explosive D).

(d) Soil containing 10 percent or more by weight of any secondary explosive or mixture of secondary explosives is considered "explosive soil." This determination was based on information provided by the USAEC as a result of studies conducted and reported in USAEC Report AMXTH-TE-CR 86096.

(e) Soil containing propellants (as opposed to primary or secondary high explosives) may also present explosion hazards.

Formerly Used Defense Site (FUDS) Property
A FUDS is defined as a facility or site (property) that was under the jurisdiction of the Secretary of Defense and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination by hazardous substances. By the Department of Defense Environmental Restoration Program (DERP) policy, the FUDS program is limited to those real properties that were transferred from DOD control prior to 17 October 1986. FUDS properties can be located within the 50 States, District of Columbia, Territories, Commonwealths, and possessions of the United States.

Feasibility Study
A study undertaken to develop and evaluate alternatives for remedial action.

Formerly Used Defense Sites (FUDS) Property
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FUDS Project
A FUDS Project is a unique name given to an area of an eligible FUDS property containing one or more releases or threatened releases of a similar response nature, treated as a discrete entity

or consolidated grouping for response purposes. This may include buildings, structures, impoundments, landfills, storage containers, or other areas where hazardous substance are or have come to be located, including FUDS eligible unsafe buildings or debris. Projects are categorized by actions described under installation restoration (HTRW and CON/HTRW), military munitions response program, or building demolition/debris removal. An eligible FUDS Property may have more than one project.

Geographic Military Districts
Geographic Military Districts consist of 22 districts within the Geographic Military Divisions. The Geographic Military District is the overall manager for the entire life cycle (i.e., "cradle to grave") for approved FUDS projects (except for PRP projects). The Geographic Military District, through the project manager (PM), leads and facilitates the project delivery team (PDT) towards effective project development and execution. The district is responsible for managing project cost, schedule, and scope to ensure quality and proper coordination with government and non-government entities. The district is also responsible for programming funding and for upward reporting. (ER 200-3-1)

Geographic Military Division
USACE military divisions have regional responsibility for the FUDS program and consist of seven military divisions. (ER 200-3-1)

Geophysical Techniques
Techniques utilized for the detection and measurement of buried anomalies (e.g., ferromagnetic indicators and ground penetrating radar) to investigate the presence of munitions.

Hazardous, Toxic, and Radioactive Waste (HTRW) Activities
HTRW activities include those activities undertaken for the Environmental Protection Agency's Superfund program, the Defense Environmental Restoration Program (DERP), including Formerly Used Defense Sites (FUDSs), and Installation Restoration Program (IRP) sites at active DOD facilities, HTRW actions associated with Civil Works projects, and any other mission or non-mission work performed for others at HTRW sites.

Intentional Detonation
An intentional detonation is a planned, controlled detonation.

Interagency Agreements
These are agreements set up between EPA and the DoD component that serve as the vehicle for remedy selection for all NPL properties when DoD is lead agency and addresses the completion of all necessary FUDS eligible remedial responses. This includes the review of cleanup alternatives, remedy selected, a cleanup schedule, and operation and maintenance arrangements. States can also be party to these agreements.

Intrusive Activity
An activity that involves or results in the penetration of the ground surface at an area known or suspected to contain MEC. Intrusive activities can be of an investigative or removal action nature.

Inventory Project Report (INPR)
The report resulting from the determination of FUDS eligibility. The INPR includes data as well as a recommendation for further action and guides investigators through further site studies. The INPR documents whether DOD is responsible for contamination at a FUDS.

Lessons Learned
Past experiences or recognized potential problems or better business practices that are captured and shared to: (1) Prevent the recurrence of repetitive design/execution deficiency; (2) Clarify interpretation of regulations or standards; (3) Reduce the potential for mistakes in high risk/probability areas of concern; (4) Pass on information specific to an installation or project; (5) Promote a good work practice that should be ingrained for repeat application; and (6) Promote efficient and cost effective business practices.

Land Use Controls (LUCs).
Physical, legal, or administrative mechanisms that restrict the use of, or limit access to, contaminated property to reduce risk to human health and the environment. Physical mechanisms encompass a variety of engineered remedies to contain or reduce contamination and physical barriers to limit access to property, such as fences or signs. The legal mechanisms are generally the same as those used for institutional controls (ICs) as discussed in the National Contingency Plan. ICs are a subset of LUCs and are primarily legal mechanisms imposed to ensure the continued effectiveness of land use restrictions imposed as part of a remedial decision. Legal mechanisms include restrictive covenants, negative easements, equitable servitudes, and deed notices. Administrative mechanisms include notices, adopted local land use plans and ordinances, construction permitting, or other existing land use management systems that may be used to ensure compliance with use restrictions. (DoD Management Guidance for the DERP)

Lead Regulatory Agency
States or tribes are generally the lead regulator for environmental investigations and response at non-NPL FUDS. In certain circumstances, EPA may serve as lead regulator when the state or tribe requests EPA assume the lead or when EPA chooses to exert its lead regulator role. In cases where a non-NPL FUDS is on or affecting tribal land, the lead regulator role generally falls to the affected tribe. Project-specific circumstances may warrant assumption of the lead regulator role by EPA. When a FUDS is either proposed for inclusion or listed on the NPL, EPA is the lead regulator.

Mag & Flag
The use of geophysical equipment to survey an area in a real-time mode and mark the location of geophysical anomalies. This method is performed without using post data processing.

Mandatory Center of Expertise (MCX)
An MCX is a USACE organization that has been approved by HQUSACE as having a unique or exceptional technical capability in a specialized subject area that is critical to other USACE commands. Specific mandatory services to be rendered by an MCX are identified on the CX's homepage at http://www.hnd.usace.army.mil/oew. These services may be reimbursable or centrally funded. USAESCH is the MCX for the USACE.

Material Potentially Presenting an Explosive Hazard (MPPEH)
Material potentially containing explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; and range-related debris); or material potentially contaminated with a high enough concentration of explosives such that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, ventilation ducts) associated with munitions production, demilitarization or disposal operations. Excluded from MPPEH are munitions within DOD's established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not intended for use as munitions.

Maximum Credible Event (MCE)
The worst single event that could occur at any time, with maximum release of a chemical agent from a munition, container, or process as a result of unintended, unplanned, or accidental occurrence. (HQDA Interim Guidance for Biological Warfare Materiel (BWM) and Non-Stockpile Chemical Warfare Materiel (CWM) Response Activities)

Military Munitions
All ammunition products and components produced for or used by the U armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes and incendiaries, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof. The term does not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components, except that the term does include non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization

operations under the *Atomic Energy Act* of 1954, (42 U.S.C. 2011 et seq.) have been completed. (10 U.S.C. 2710(e)(3)(A))

Military Munitions Response Program (MMRP)
The MMRP category is defined as response actions (i.e., the identification, investigation, and remedial actions, or a combination of removal and remedial actions) to address Munitions and Explosives of Concern (MEC) or Munitions Constituents (MC). This includes the removal of foreign military munitions if it is incidental to the response addressing DOD military munitions at a FUDS property. (ER 200-3-1)

Military Range
Designated land or water area set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas. [Military Munitions Rule, 40 CFR. 266.201]

Munitions and Explosives of Concern (MEC)
This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks, means:
(a) Unexploded Ordnance (UXO), as defined in 10 U.S.C. 2710 (e) (9);
(b) Discarded Military Munitions (DMM), as defined in 10 U.S.C. 2710 (e) (2), or
(c) Munitions constituents (e.g., TNT, RDX) present in high enough concentrations to pose an explosive hazard.

Munitions Constituents (MC)
Any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions. (10 U.S.C. 2710(e)(4))

Munitions Debris
Remnants of munitions (e.g., fragments, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

Munitions Response
Response actions, including investigation, removal and remedial actions to address the explosives safety, human health, or environmental risks presented by unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC).

Munitions Response Area
Any area on a defense site that is known or suspected to contain UXO, DMM, or MC. Examples include former ranges and munitions burial areas. A munitions response area is comprised of one or more munitions response sites.

Munitions Response Site
A discrete location within a MRA that is known to require a munitions response.

National Oil and Hazardous Substance Pollution Contingency Plan (NCP)
Revised in 1990, the NCP provides the regulatory framework for responses under CERCLA. The NCP designates the Department of Defense as the removal response authority for ordnance and explosives hazards.

Non-Stockpile Chemical Warfare Materiel
CWM (see definition) that is not included in the chemical stockpile. Non-stockpile CWM is divided into five categories: buried CWM, recovered chemical weapons (items recovered during range clearing operations, from chemical burial sites, and from research and development testing), former chemical weapon production facilities, binary chemical weapons, and miscellaneous CWM (unfilled munitions and devices and equipment specially designed for use directly in connection with employment of chemical weapons).

OE Safety Specialist
USACE personnel, classified as a GS-0018 Safety Specialist, and who is UXO-qualified. OE Safety Specialists perform safety, quality assurance and MM DC functions for the Government. The OE Safety Specialist may reside in and report to the construction field office or may reside in the engineering/construction office within the MM DC.

Performance Based Contracts (PBC)
Performance-based contracting methods are intended to ensure that required performance quality levels are achieved and that total payment is related to the degree that services performed meet contract standards. Performance-based contracts: (a) Describe the requirements in terms of results required rather than the methods of performance of the work; (b) Use measurable performance standards (i.e., terms of quality, timeliness, quantity, etc.) and quality assurance surveillance plans; (c) Specify procedures for reductions of fee or for reductions to the price of a fixed-price contract when services are not performed or do not meet contract requirements; and (d) Include performance incentives where appropriate. (Federal Acquisition Regulations, part 37.601)

Potentially Responsible Parties (PRP)
A PRP is defined in CERCLA Section 107 as any person related to a property that is a:

- Current owner or operator.

- Past owner or operator at the time of disposal of any hazardous substance, pollutant, or contaminant.
- Person who arranges for disposal, treatment, or transport for disposal or treatment of hazardous substances.
- Transporter who has selected the site for the disposal of a hazardous substance.

Preliminary Assessment (PA)
The Preliminary Assessment is a limited-scope investigation that collects readily available information about a project and its surrounding area. The PA is designed to distinguish, based on limited data, between sites that pose little or no threat to human health and the environment and sites that may pose a threat and require further investigation. The PA also identifies sites requiring assessment for possible emergency response actions. If the PA results in a recommendation for further investigation, a Site Inspection is performed. Refer to the EPA publication *Guidance for Performing Preliminary Assessments Under CERCLA*, September 1991, for additional information.

Project Delivery Team (PDT)
The PDT is a multi-disciplined project team lead by the Project Manager with responsibility for assuring that the project stays focused, first and foremost on the public interest, and on the customer's needs and expectations, and that all work is integrated and done in accordance with a PMP and approved business and quality management processes. The PDT focuses on quality project delivery, with heavy reliance on partnering and relationship development to achieve better performance. The PDT shall consist of everyone necessary for successful development and execution of all phases of the project. The PDT will include the customers, the PM, technical experts within or outside the local USACE activity, specialists, consultants/contractors, stakeholders, representatives from other Federal and state agencies, and higher level members from Division and Headquarters who are necessary to effectively develop and deliver the project actions. The customer is an integral part of the PDT. (ER 5-1-11)

Project Management Plan (PMP)
A living document used to define expected outcomes and guide execution and control of project (or program) actions. Primary uses of the PMP are to facilitate communication among participants, assign responsibilities, define assumptions, and document decisions. Establishes baseline plans for scope, cost, schedule, safety, and quality objectives against which performance can be measured, and to adjust these plans as actual performance dictates. The project delivery team develops the PMP.

Project Manager (PM)
The PM is responsible for management and leadership of a project during its entire life cycle, even when more than one USACE District or activity is involved. The PM will generally reside at the geographic District but can be elsewhere as needed. The PM and PDT are

responsible and accountable for ensuring the team takes effective, coordinated actions to deliver the completed project according to the PMP. The PM manages all project resources, information and commitments, and leads and facilitates the PDT towards effective development and execution of project actions. (ER 5-1-11)

Past Performance Information Management System (PPIMS)
The PPIMS is the Army's central repository for the collection and utilization of Army-wide contractor Past Performance Information (PPI). Available to authorized Government personnel, PPIMS is used to support both the Contracting Performance Review process and future award decisions. For further information on PPIMS go to: https://apps.altess.army.mil/ppims/prod/ppimshp.cfm

Public Involvement Plans (PIP)
Formerly called the Community Relations Plan, the Public Involvement Plan serves as the framework to establish a successful information exchange with the public during the Environmental Restoration Process. The PIP follows guidelines set forth under CERCLA and the SARA. Each PIP must be tailored to fit the individual site and situation and should also accommodate any site-specific agreements between the U.S. Army and the EPA or state environmental agencies. The PIP is not a static document and should be revised to reflect the development and progress of actions at the project.

Quality
The totality of features and characteristics of a product or service that bear on its ability to meet the stated or implied needs and expectations of the project. Quality expectations need to be negotiated among the PDT members (which includes the customer) and are set in the Project Management Plan. (ER 5-1-11). More specifically, the quality of a response action is measured by how closely that response action meets the standards and expectations of the customer.

Quality Assurance (QA)
An integrated system of management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed to meet project requirements defined in the PMP.

Quality Assurance Surveillance Plan (QASP)
All service contracts require the development and implementation of a QASP. A QASP describes how government personnel will evaluate and assess contractor performance. The purpose of the QASP is to describe how project performance will be measured and assessed against performance standards. It is based on the premise that the contractor, not the government, is responsible for managing quality control (QC).

Quality Control (QC)
The overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established in the PMP; operational techniques and activities that are used to fulfill requirements for quality.

Quantity-Distance (Q-D)
The quantity of explosives material and distance separation relationships that provide defined types of protection. These relationships are based on levels of risk considered acceptable for the stipulated exposures and are tabulated in the appropriate Q-D tables provided in DOD 6055.9-STD. Separation distances are not absolute safe distances but are relative protective safe distances. Greater distances than those shown in the Q-D tables will be used whenever possible. (DOD 6055.9-STD)

Quality Management
Processes required to ensure that the actions at the project would satisfy the needs and objectives for which it was undertaken, consisting of quality planning, quality assurance, quality control, and quality improvement.

Quality Management Plan (QMP)
A document that describes a quality system in terms of the organizational structure, policy and procedures, functional responsibilities of management and staff, lines of authority, and required interfaces for those planning, implementing, documenting, and assessing all activities conducted.

Quality System
A structured and documented management system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services. The quality system provides the framework for planning, implementation, and assessing work performed by the organization and for carrying out required QA and QC. (ER 5-1-11).

Range-Related Debris (RRD)
Debris, other than munitions debris, collected from operational ranges or from former ranges (e.g., target debris, military munitions packaging and crating material).

Record of Decision (ROD).
The ROD is a public document that explains which alternatives will be used to clean up a Superfund site. The ROD for sites listed on the NPL is created from information generated during the RI/FS.

Recovered Chemical Warfare Materiel (RCWM).
An item configured as a munition containing a chemical substance that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. Also includes V- and G- series nerve agents, H- series blister agent, and lewisite in other-than-munition configurations. Due to their hazards, prevalence, and military-unique application, chemical agent identification sets (CAIS) are also considered CWM. CWM does not include: riot control agents, chemical herbicides; smoke and flame producing items; or soil, water, debris, or other media contaminated with chemical agent. (HQDA Interim Guidance for Biological Warfare Materiel and Non- Stockpile Chemical Warfare Materiel Response Activities). (EP 75-1-3)

Remedial or Remedial Action (RA)
Those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health, welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage; confinement; perimeter protection using dikes, trenches, or ditches; clay cover; neutralization; cleanup of released hazardous substances and associated contaminated materials; recycling or reuse; diversion; destruction; segregation of reactive wastes; dredging or excavations; repair or replacement of leaking containers; collection of leachate and runoff; onsite treatment or incineration; provision of alternative water supplies; and any monitoring reasonably required to assure that such actions protect the public health, welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health or welfare. The term includes offsite transport and offsite storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials. (*DoD Management Guidance for the DERP*)

Remedial Action-Construction (RA-C)
The period during which the final remedy is being put in place. The end date signifies that the construction is complete, all testing has been accomplished, and that the remedy will function properly. (*DoD Management Guidance for the DERP*)

Remedial Action Operations (RA-O)
The period during which the remedy is in place and operating to achieve the cleanup objective identified in the Record of Decision or equivalent agreement. Any system operation or monitoring requirements during this time shall be termed RA-O. (*DoD Management Guidance for the DERP*)

Remedial Design (RD)
A phase of remedial action that follows the remedial investigation/feasibility study and includes development of engineering drawings and specifications for a site cleanup.

Remedial Investigation
Process undertaken to determine the nature and extent of the problem presented by a release which emphasizes data collection and site characterization. The remedial investigation is generally performed concurrently and in an interdependent fashion with the feasibility study.

Remedial Investigation/Feasibility Study (RI/FS)
See separate definitions for remedial investigation and feasibility study.

Remedy In Place
Designation that a final remedial action has been constructed and implemented and is operating as planned in the remedial design. An example of a remedy in place is a pump-and-treat system that is installed, is operating as designed, and will continue to operate until cleanup levels have been attained. Because operation of the remedy is ongoing, the site cannot be considered Response Complete. (DoD Management Guidance for the DERP)

Removal or Removal Action
The cleanup or removal of released hazardous substances from the environment. Such actions may be taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under section 9604(b) of this title, and any emergency assistance which may be provided under the Disaster Relief and Emergency Assistance Act [42 U.S.C. 5121 et seq.] The requirements for removal actions are addressed in 40 CFR §§300.410 and 330.415. The three types of removals are emergency, time-critical, and non time-critical removals. (*DoD Management Guidance for the DERP*)

Resource Conservation and Recovery Act (RCRA)
Enacted in 1976, RCRA promotes the protection of health and the environment. It regulates waste generation, treatment, storage, transportation, and disposal for facilities currently in operation.

Response Action
A CERCLA-authorized action involving either a short-term removal action or a long-term removal response. This may include, but is not limited to, removing hazardous materials, containing or treating the waste on-site, and identifying and removing the sources of ground water contamination and halting further migration of contaminants.

Response Complete (RC).
The remedy is in place and required remedial action-operations (RA-O) have been completed. If there is no RA-O phase, then the remedial action-construction end date will also be the RC date. (DoD Management Guidance for the DERP)

Restoration Advisory Board (RAB)
A Restoration Advisory Board (RAB) is a forum for the discussion and exchange of information between representatives of the Department of Defense (DoD), regulators, state and local governments, tribal governments, and the affected community. RABs provide an opportunity for stakeholders to have a voice and actively participate in the review of technical documents, to review restoration progress, and to provide individual advice to decision makers regarding restoration activities at FUDS Properties and Projects.

Site Inspection (SI)
Activities undertaken to determine whether there is a release or potential release and the nature of associated threats. The purpose is to augment the data collected in the PA and to generate, if necessary, sampling and other field data to determine the presence, type, distribution, density, and location of hazardous substances or military munitions.

Stakeholder
Stakeholders include Federal, state, and local officials, tribal officials, community organizations, property owners, and others having a personal interest or involvement or having a monetary or commercial involvement in the FUDS Property that is to undergo a remedial/response action.

Team Separation Distance (TSD)
The TSD is the distance the project teams will be separated during intrusive operations.

Technical Project Planning (TPP).
The process for designing data collection programs at FUDS properties. The TPP process helps ensure that the requisite type, quality, and quantity of data are obtained to satisfy project objectives that lead to informed decisions and project/property closeout.

Time-Critical Removal Action (TCRA)
A TCRA is a response to a release or threat of release that poses such a risk to public health (serious injury or death), or the environment, that clean up or stabilization actions must be initiated within six months.

Tribes.
Federally recognized American Indian and Alaskan Native governments.

Unexploded Ordnance (UXO)
Military munitions that: (a) Have been primed, fuseds, armed, or otherwise prepared for action; (b) Have been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (c) Remain unexploded either by malfunction, design, or any other cause. (U.S.C. 2710 (e) (9))

Unintentional Detonation
A detonation not planned in advance.

UXO Personnel
Contractor personnel who have completed specialized military training in EOD methods and have satisfactorily performed the EOD function while serving in the military. Various grades and contract positions are established based on skills and experience. Check with the MM CX for current ratings.

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